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(51) International Patent Classification 7 :	A1	(11) International Publication Number: WO 00/57374
G07F 19/00, 7/08		(43) International Publication Date: 28 September 2000 (28.09.00)

(54) Title: SYSTEM AND METHOD FOR PRE-AUTHORIZATION OF INDIVIDUAL ACCOUNT REMOTE TRANSACTIONS

(57) Abstract

An account processing method and system for providing specific pre-authorization parameters for transactions that require specific pre-authorization by a network user specifying conformity parameters within which any requested transaction parameters must comply in order to enable the requested transaction to be approved. Upon establishment of an account, transaction types by standard industrial code (SIC) are specified as needing specific authorization prior to approving the transaction as requested by a merchant. An account issuer provides a service to account members that permits network user to independently specify the parametric conditions under which to approve a transaction within such categories. Once a transaction is approved, the pre-authorization is spent and requires individual pre-authorization of each transaction, thereby minimizing misuse of an account number by merchants or others that come into possession of the network user's account number.

SYSTEM AND METHOD FOR PRE-AUTHORIZATION OF

INDIVIDUAL ACCOUNT REMOTE TRANSACTIONS

RELATED APPLICATIONS

This application is a continuation-in-part of U.S. Patent Application Serial No. 08/957,419 filed October 24, 1997 entitled "System and Method for Pre-Authorization of Individual Account Transactions."

BACKGROUND OF THE INVENTION

1. The Field of the Invention

The present invention relates to electronic authorization of financial transactions, and in particular, to electronic authorization of specific predetermined transactions. More particularly, the present invention relates to specific authorization of individual transactions otherwise inhibited or prohibited.

2. Present State of the Art

Modernly, more and more transactions in commerce have come to rely upon the convenience of utilizing a transaction card such as a credit card for the purchasing of goods and services. As credit cards have become more ubiquitous, so also has the infrastructure supporting the use of credit cards in commerce. At one point, what was a simple relationship between a card issuer and a cardholder has evolved to include intermediaries providing authorization services and financial distribution services. Such an expansive infrastructure has come to facilitate on-line or near real-time transaction authorization.

Furthermore, because of the extensive nature of the credit card infrastructure, additional users, not necessarily relying upon credit, also utilize the existing infrastructure in carrying out commerce. For example, businesses or corporations may establish a series of accounts with a card issuer and distribute

transaction cards to their members for use in executing cashless transactions. To minimize fraud and abuse in the purchasing of goods and services, authorization standards have been established. Figure 1 represents a standardized authorization process for transaction verification. An account manager, such as a fleet manager or other entity, desiring cashless transaction privileges contacts a card issuer 114 to request the extension of transaction privileges through an established account request 116. Typically, when establishing a credit account, card issuer 114 places restrictions such as transaction amount limitations upon the card user. However when establishing accounts for business or other like users, account manager 102 may request that card issuer 114 deny certain transactions and strictly enforce other limitations on transactions.

Exemplary desired account limitations include restrictions on the types of services and goods that may be procured by an account user 104 as directed by account manager 102. Industry standards have been established for the partitioning of goods and services into categories designated by a standard industrial code (SIC). A merchant 106 is assigned a specific standard industrial code corresponding to their predominate business function. For business transactions that adhere to the SIC coding, transactions originating at a point of sale terminal having a restricted SIC identifier may be unable to obtain proper authorization to complete a transaction with an account user. Other limitations frequently desired by account managers include transactional limits. Transactional limits may include single transaction limits or aggregate limitations upon successive transactions.

Card issuer 114 upon the establishment of an account may employ a third party authorizing agent to provide authorization services and strictly enforce transaction limitations as agreed upon between account manager 102 and card issuer 114. Card issuer 114 through an establish authorization request 118 informs

authorizing agent 112 of the transaction terms under which transaction authorization may be granted.

Once an account has been established account manager 102 provides the account information necessary to enable account user 104 to engage in commerce transactions. Such account information generally includes an account number as assigned by card issuer 114. The predominate form of providing account information to account user 104 is to provide account user 104 with a transaction card generally taking the form of a credit card-like card bearing the account number thereon. Account user 104 upon initiating a transaction with a merchant 106 engages in a payment presentment step 120 by providing the requisite account information to merchant 106. Merchant 106 engages in an authorization process to verify that the transaction parameters of the present transaction are within the boundaries or limitations placed upon the account as requested by account manager 102 or imposed by card issuer 114. An authorization request 122 issued by merchant 106 is comprised of an account number, a transaction amount and other parameters such as a standard industrial code (SIC), a merchant identifier (MID) and an acquiring bank identification number (BIN).

A merchant 106 typically associates with an acquiring bank 108 which provides funding services of merchant transactions. Authorization requests may electronically pass through acquiring bank 108 as designated by the BIN of the authorization request and additionally may route through a card company 110 (*e.g.*, MasterCard®, VISA®, Discover Card® or American Express®) prior to reaching authorizing agent 112 for comparison of account parameters. Authorizing agent 112 compares the transaction parameters for conformance with account limitations. Authorizing agent 112 issues an authorization response 124 comprising an acceptance or denial indicator.

During general authorization processing, funds generally do not transfer at that time. A settlement generally occurs at a periodic time such as evenings or nights when a merchant re-initiates communication with an authorizing agent and presents a series of accepted and authorized transactions occurring throughout the previous period and requests financial settlement of such transactions. Merchant 106 initiates a settlement request 126 with authorizing agent 112 which generally comprises the account number to be debited, the amount of the debit and other information such as SIC, MID and BIN designators. As part of the settlement process, authorizing agent 112 issues a settlement request 128 to card issuer 114. Frequently a settlement request 128 includes less cryptic merchant information (i.e., merchant name and city/state address instead of MID) for later presentment to an account manager. Card issuer 114 in a payment settlement response step 130 passes payment information on to merchant's acquiring bank 108 with the appropriate funds transferring in a step 131.

At yet another periodic point in time, card issuer 114 provides a billing account 132 to account manager 102 for notification of payment due or for other record keeping purposes. Such billing account information may be presented in various forms including printed statements as well as electronic reporting. In such generic authorization processing as described above, billing account information contains relatively little and non-descriptive information such as an account number, a transaction amount and merchant information.

At least three particular shortcomings of the authorization process as described in Figure 1 should be pointed out. First, authorization performed by authorizing agent 112 provides a regulation of transactions by either proscribing transactions originating at a merchant having a proscribed SIC goods/services designator, or withholding authorization from transactions that exceed

transactional limits. Such an authorization process approves transactions of values less than the transactional limits transpiring at non-proscribed merchant point of sale terminals having a non-barred SIC goods/services designator. Prior art authorization techniques do not provide a method or system for enforcing strict transaction parameters prior to authorization of restricted transaction types on a transaction by transaction basis. Additionally, prior art techniques do not permit an account manager to create transaction authorization parameters without re-initiating account establishment procedures.

A second shortcoming of the authorization processing in the prior art relates to billing account information sent from card issuer 114 for evaluation by account manger 102. As shown in Figure 1, the billing account information is comprised of an account number and an amount coupled to merchant information such as the name and city of the merchant. An account manager does not have a tracking mechanism to track the execution of a specific transaction and the billing of such a transaction on a billing statement if the vendor and acquiring bank cannot provide this functionality. In prior art configurations, the account manager only discerns that a certain amount of money, a transaction amount, was exchanged with a specific merchant.

Other transaction systems have incorporated item descriptions generally ascertainable from SKU numbers listing goods or services obtained from the listed merchant into their billing statements. It should be noted that such techniques still do not provide a tracking mechanism for linking a specific authorization procedure to a billing account printout.

A third short coming of the authorization processing in the prior art relates to the inability to prevent fraudulent successive transactions using the account number of an account user once it has been divulged to a merchant. In many

instances and applications, transactions are performed remotely from the physical presence of the account user thereby foreclosing the account user from discretionary evaluation of the credibility of the merchant with which an account user's account number would be divulged. In such an application, the rogue merchant would be free to utilize the account number in successive authorization requests and alternatively could resell or post an account user's account number for indiscriminate use by other devious entities. Because such an opportunity exists such as in the case of remote network and chiefly Internet purchasing environments, account users have theretofore been hesitant to engage in electronic commerce using a credit or other form of transaction card or vehicle that exposes an account user's account number into an environment whose security is at best suspect.

Accordingly, what is needed is a method and system for authorizing in advance or pre-authorizing transactions that but for specific authorization, are otherwise proscribed.

What is also needed is a method and system for enforcing parameters upon such pre-authorized transactions such as transaction amounts, specific merchants and other transaction related parameters.

Also, what is yet needed, is a method and system for facilitating an audit or record reconciliation from a pre-authorized transaction through the billing of the account thus informing an account manager of the completion of a pre-authorized transaction.

SUMMARY AND OBJECTS OF THE INVENTION

It is an object of the present invention to provide a method for authorizing an account when a portion of the account transactions require individual pre-authorization according to specified pre-authorization parameters.

It is another object of the present invention to provide a system for authorizing an account when a portion of the account transactions require individual pre-authorization according to specified pre-authorization parameters.

It is a further object of the present invention to provide a method for authorizing a portion of account transactions otherwise denied by requiring individual pre-authorization according to parameters pre-authorized in a pre-authorization process.

It is yet another object of the present invention to provide a method and system for associating a transaction identifier within a pre-authorization process such that upon the completion of the transaction, the associated transaction identifier follows the transaction information through the billing account phase, thus allowing reconciliation of a specific transaction from a previously assigned transaction identifier.

It is still yet another object of the present invention to provide a method and system for authorizing all account transactions which without such pre-authorization would otherwise be denied in wholesale. Such a method and system enforces a collateral pre-authorization of each and every transaction in order to approve or accept an authorization transaction initiated by a merchant entity.

Additional objects and advantages of the invention will be set forth in the description which follows, and in part will be obvious from the description, or may be learned by the practice of the invention. The objects and advantages of the

invention may be realized and obtained by means of the instruments and combinations particularly pointed out in the appended claims.

To achieve the foregoing objects, and in accordance with the invention as embodied and broadly described herein, an account processing method and system for facilitating the general denial of all or specific categories of transactions unless they are specifically pre-authorized with specified parameters and the parameters of the requested transaction conform to those pre-authorized parameters is provided. Additionally, the present invention provides a system and method for the pre-authorization of specific transactions to be performed by an account manager via a service provided by an account issuer to their customers such as account managers and users.

A further advancement of the present invention provides a method and system for allowing an account manager to define a transaction identifier (e.g., insurance claim number, purchase order number, work order number, etc.) and attach the transaction identifier through a pre-authorization of a transaction. Upon the initiation and authorization of a requested transaction conforming to the specified pre-authorization parameters, the transaction identifier is included with the generic billing information (e.g., transaction amount, merchant information, etc.) thus allowing an account manager to reconcile their accounting from a billing account information containing the transaction having the transaction identifier associated thereto with a pre-transaction assignment of a traditional identifier such as purchase order number, work order number, or insurance claim number.

The above described system and method includes an account establishment phase of an account process wherein an account manager approaches a card issuer to establish an account in an establish account step. During the establishment of an account, limitations on transactions relating to that account are

1 negotiated between the account manager and card issuer. Transaction limitations

2 generally include items such as transaction limits, account balance limit,

3 limitations on categories of goods or services as denoted by standard industrial

4 codes (SIC) and other parameters that may be incorporated into a specific

5 accounting scheme. In an alternate embodiment, a system and method is described

6 wherein a consumer-to-business transaction environment, the account user

7 personally initiates the account establishment phase with the card issuer.

8   In the present invention, upon the establishment of an account or during the

9 amending or changing of an account, transactions involving certain categories of

10 goods or services as denoted by pre-authorization SICs that denote categories of

11 goods or services, have individual parametric constraints placed upon them. A card

12 issuer employs the services of an authorizing agent for performing account

13 authorization upon the initiation of a transaction request from a merchant. The

14 card issuer, in an establish authorization step, forwards various parameters such as

15 SIC limits that wholly bar categories of transactions, transaction limits relating to

16 non-pre-authorization transactions and pre-authorization SICs designating

17 categories of goods or services requiring specific authorization in conformance

18 with pre-authorization parameters subsequently dispatched to the designated

19 authorizing agent in a pre-authorization process.

20   In the present invention, once an account is established with a card issuer,

21 an account manager may perform pre-authorization of transactions with the card

22 issuer directly. In the preferred embodiment, an account manager using a

23 communication device such as a personal computer may routinely generate pre-

24 authorization requests by transferring pre-authorization parameters to the card

25 issuer via communication channel such as the INTERNET. In an alternate

26 embodiment such as a consumer-to-business environment, the account user may

personally perform the transaction pre-authorization directly with the card issuer. In a remote or networking-type environment, the account user may pre-authorize the transaction by employing a network such as the INTERNET which enables the account user to interface with the card issuer through a card issuer's interactive interface such a web page.

A typical scenario wherein the present invention is practiced provides for a pre-authorization transaction phase that commences with a request by an account user for a specified good or service that requires pre-authorization prior to initiating the transaction. The account user consults with the account manager for requesting restricted goods or services. The account manager in turn contacts the merchant for negotiating or obtaining a price quotation for the requested goods or services, or optionally; the account manager arrives at a quotation amount by consulting other traditional pricing sources such as directories or catalogs.

The account manager issues a pre-authorization request to the card issuer via a personal computer. The account manager in the pre-authorization request specifies an account number for which pre-authorization transaction parameters apply. In the preferred embodiment, one or more transaction parameters including a quote amount resulting from the quotation process, an acceptable variance or deviation range from the quotation amount, a merchant identifier (MID) or an acquiring bank identification number (BIN) are dispatched to the card issuer. It should be pointed out that in the present invention, one or more of the pre-authorization parameters may be specified while others may not be specified thus permitting the spectrum of possible options for such criteria. The card issuer relays the pre-authorization parameters to the authorizing agent for storage and usage during authorization processing. In an alternate consumer-to-merchant environment, the account user assumes the role of the account manager

by both seeking out the goods or services to be procured and additionally by pre-authorizing or approving a future transaction that undergoes a merchant authorization request.

Another aspect of the present invention includes the ability to input or provide a transaction identifier for association with an authorized completed transaction. The transaction identifier, in the preferred embodiment, provides an alpha-numeric field wherein an identifier may be specified and associated with a pre-authorized transaction and upon the initiation and authorization of the requested transaction, the transaction identifier is reported in the billing account information. Such a transaction identifier enables an account manager to associate a pre-authorization of a transaction with a transaction reported in a billing account thereby allowing reconciliation of accounting entries.

The pre-authorization parameter record remains within the authorizing agent until a matching transaction is initiated by an account user. When an account user initiates a transaction for goods or services, a merchant initiates an authorization request for approval. In the present invention, the authorization request takes the form of presentment of a transaction card or other credit card-like credentials bearing an account number as previously assigned for use by the account user. An account user or account manager may present the account number to the merchant using means other than a transaction card such as the presentment, verbal disclosure, electronic disclosure or written disclosure of an account number to the merchant.

During the authorization, the merchant forwards the account number, the transaction amount, and alternatively other information such as the merchant's SIC denoting its category of goods or services, the merchant's MID and the acquiring BIN associated with the merchant. The authorizing agent performs the

authorization process which includes consulting the pre-authorization table when the merchant SIC presented in the authorization request corresponds to a pre-authorization SIC presented during the establishment of the account. The authorizing agent issues an authorization response listing the acceptance or denial status resulting from the authorization process.

During the settlement of the account, generally at the end of the business day, the merchant forwards the account numbers, the transaction amounts and other pertinent and related information such as the merchant's SIC and city location relating to each of the authorized transactions for the day. In one embodiment of the present invention, the authorizing agent additionally forwards the transaction identifier as received in the pre-authorization request. In the billing account issued by the account issuer to the account manager, the billing account includes details of the account number, the transaction amount, merchant information and when present the transaction identifier. By presenting the transaction identifier to the account manager, transactions authorized in the pre-authorize transaction phase may be traced through the authorization, settlement and reporting phases of account processing. By tracing or having a designator assigned to a specific transaction, the accounting resources of the account manager may close out such transactions upon reporting the completion of the transaction.

In a networked consumer user-to-merchant environment, such as in an electronic commerce environment, the individual pre-authorization of each transaction by a user prior to the actual payment presentment activity, minimizes the fraudulent use of an account user's account number when divulged during a payment presentment step. Such misuse is curbed due to the fact that any subsequent authorization requests by a merchant or unauthorized user would be denied since the account user would not have individually pre-authorized each and

1   every transaction attempted by the user rogue merchant thereby denying subsequent

2   debits against the account user's account.

3   These and other objects and features of the present invention will become

4   more fully apparent from the following description and appended claims, or may

5   be learned by the practice of the invention as set forth hereinafter.

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BRIEF DESCRIPTION OF THE DRAWINGS

In order that the manner in which the above-recited and other advantages and objects of the invention are obtained, a more particular description of the invention briefly described above will be rendered by reference to specific embodiments thereof which are illustrated in the appended drawings. Understanding that these drawings depict only typical embodiments of the invention and are not therefore to be considered limiting of its scope, the invention will be described and explained with additional specificity and detail through the use of the accompanying drawings in which:

Figure 1 is a flow diagram of an authorization process, in accordance with the prior art;

Figure 2 is a flow diagram of a pre-authorization process, in accordance with a preferred embodiment of the present invention;

Figure 3 is a block diagram of an authorization table including both standard and pre-authorization tables as stored within an authorizing agent, in accordance with a preferred embodiment of the present invention;

Figure 4 is a flow chart of a transaction authorization procedure in a pre-authorization-capable authorizing agent, in accordance with an embodiment of the present invention;

Figure 5 is a representative billing statement containing a transaction identifier as associated with a pre-authorized transaction and subsequently forwarded to an account manager upon completion of a pre-authorized transaction, in accordance with an embodiment of the present invention;

Figure 6 is a flow diagram illustrating account processing which employs pre-authorization of select transactions without requiring an account user to

perform a payment presentation step, in accordance with an embodiment of the present invention;

Figure 7 is a simplified transaction diagram for use in a wide-area networking environment, in accordance with a preferred network embodiment of the present invention;

Figure 8 is a flow diagram of a pre-authorization process for use in a wide-area networking environment, in accordance with a preferred network embodiment of the present invention; and

Figure 9 is a block diagram of an authorization table including both standard and pre-authorization tables as stored within an authorizing agent, in accordance with a preferred network embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

As used herein, the term "account manager" refers to an individual or organization charged with establishing and monitoring an account. An account manager may be in charge of many accounts and take the form of fleet managers, accounting managers, claims adjusters and also prudent account users.

As used herein, the term "account user" refers to an individual, consumer or organization seeking goods or services and may also take the form of fleet users, business personnel and insured parties. It should be noted that an account manager and an account user may be the same party.

As used herein, the term "merchant" refers to an individual or organization providing goods or services in exchange for a fee. Merchants generally facilitate the reimbursement transaction by providing a point-of-sale terminal or other device through which a transaction is initiated including a computer network interface for interacting over a network such as a LAN or WAN including the Internet.

As used herein, the term "acquiring bank" refers to a financial institution providing financial services for an associated merchant. An acquiring bank is generally a bank or like organization at which a merchant maintains an account for reconciliation of funds.

As used herein, the term "bank card association" refers to a sponsoring organization that provides financial services and brings organization and infrastructure into the account processing.

As used herein, the term "authorizing agent" refers to an organization which may be part of a card company and provides assurances to a merchant of the good standing of the account in question and conformity of the requested transaction to limitations and parameters placed upon a transaction.

As used herein, the term "account or card issuer" refers to an organization providing administrative services to an account user or account manager. Account issuer may also provide augmented services to an account user or manager such as access to an authorizing agent for account establishment and other functions such as pre-authorization.

As used herein, the term "authorization web page" refers to a computer network-accessible intermediary interface into which a web account user (consumer) may place parametric transaction authorization information that is forwarded to an authorizing agent for use in evaluating the legitimacy of a specific transaction.

It should also be appreciated that the functions of the "bank card association," "authorizing agent," "card issuer," and the sponsor of an "authorization web page" may be one or several entities providing a combination of these functions.

As described in the Background of the Invention, Figure 1 is a flow diagram of an authorization process in accordance with the prior art.

Figure 2 is a flow diagram of account processing incorporating pre-authorization of individual transactions or transaction types, in accordance with a preferred embodiment of the present invention. As account processing has become increasingly prevalent and sophisticated, the complexities of account processing have also increased. For example, in the establishment and processing of an account, additional specified participants are incorporated into the processing flow. In one preferred embodiment, during an account establishment phase of an account process, an account manager 202 approaches a card issuer 214 to establish an account as represented in Figure 2 by establish account step 216. During the establishment of an account, limitations on transactions relating to that account are

negotiated between account manager 202 and card issuer 214. Transaction

limitations generally include items such as transaction limits, account balance

limit, limitations on categories of goods or services as denoted by standard

industrial codes (SIC) and other parameters that may be incorporated into a specific

account scheme.

In the present embodiment of the invention, upon the establishment of an

account or during the amending or changing of an account, transactions involving

certain categories of goods or services as denoted by pre-authorization SICs denote

goods or services that require individual parametric constraints upon such

transactions. For example, account manager 202 may establish an account for use

by an account user 204 for performing maintenance upon a fleet vehicle. In order

to police the use of the account for limited maintenance purposes, account

manager 202 designates the SIC associated with maintenance as a pre-authorization

SIC requiring conformity to transaction parameters subsequently defined by

account manager 202.

Card issuer 214 employs the services of an authorizing agent 212 for

performing account authorization upon the initiation of a transaction request from

a merchant. Card issuer 214 in establish authorization step 218 forwards SIC limits

controlling categories of transactions, transaction limits relating to non-pre-

authorization transactions and pre-authorization SICs designating categories of

goods or services requiring specific authorization according to pre-authorization

parameters subsequently dispatched to authorizing agent 212.

In the present invention, once an account is established with a card issuer,

account manager 202 may perform pre-authorization of transactions with card

issuer 214 directly. In the preferred embodiment, account manager 202 using a

personal computer may routinely generate pre-authorization requests by

transferring pre-authorization parameters to card issuer 214 via the INTERNET.

A pre-authorization transaction phase commences with a request 220 by an account user 204 for a specified good or service that requires pre-authorization prior to initiating the transaction. Account user 204 consults with account manager 202 to obtain restricted goods or services. Account manager 202 in turn contacts a merchant 206 for negotiating or obtaining a price quotation 222, including a quote amount for the requested goods or services. Optionally, account manager 202 may consult a price quotation directory or catalog containing price quotations for goods or services as requested by account user 204. In yet another option, account manager 202 may independently generate or approximate a quote amount for a requested goods or service for use in the pre-authorization process.

Account manager 202 issues a pre-authorization request 224 to card issuer 214, in the preferred embodiment, using a personal computer that is electronically coupled to card issuer 214. Account manager 202 in pre-authorization request 224 specifies an account number for which pre-authorization transaction parameters apply. In the preferred embodiment, one or more transaction parameters including a quote amount resulting from the quotation process, an acceptable variance, or deviation range from the quotation amount, a merchant identifier (MID) and an acquiring bank identification number (BIN) are dispatched to card issuer 214. It should be pointed out that in the present invention, one or more of the pre-authorization parameters may be specified while others may not be specified, thus permitting the spectrum of possible options for such criteria. For example, account manager 202 may specify a quote amount and a variance or deviation from the quote amount, such as in the case permitting the inclusion of sales tax with the quoted transaction amount, while leaving the merchant identifier and acquiring bank identification number unspecified, thereby.

permitting an account user to seek out the goods or services of any merchant for

processing the requested transaction.

Another field that may be input or provided by account manager 202 is a

transaction identifier field.   The transaction identifier, in the preferred

embodiment, provides an alpha-numeric field wherein an identifier may be

associated with a pre-authorized transaction and upon the initiation and

authorization of the requested transaction, the transaction identifier is reported in

the billing account information. Such a transaction identifier enables an account

manager to associate a pre-authorization of a transaction with a transaction

reported in a billing account thereby allowing reconciliation of accounting entries.

Referring to Figure 2, card issuer 214 employs its established relationship

with authorizing agent 212 to forward a pre-authorization request 226 comprised

of the account number and other transaction parameters which may optionally

include a transaction identifier. Authorizing agent 212 retains and stores the pre-

authorization transaction parameters in a pre-authorization table 318 (Figure 3) for

subsequent authorization when a transaction presents an SIC corresponding to one

designated as a pre-authorization SIC.

The pre-authorization parameter records remain within authorizing

agent 212 until a matching transaction is initiated by an account user. Optionally,

pre-authorization parameters may become stale and expire if not timely used.

Account user 204 requests goods or services from merchant 206 and thereafter

initiates a payment presentment 228 for reimbursement to merchant 206. In the

preferred embodiment, payment presentment 228 takes the form of presentment of

a transaction card or other credit card-like credentials bearing an account number

as previously assigned for use by account user 204. It should be noted that the

present invention does not require account user 204 to present tangible credentials

bearing an account number, but also accommodates the presentment of an account number to a merchant in intangible form, such as the recitation of an account number to merchant 206 for discrete key entry by merchant 206 at the commencement of the authorization process.

In yet another embodiment as detailed in Figure 6, account manager 202 (Figure 2) rather than account user 204 (Figure 2) divulges an account number for use by merchant 206 (Figure 2) upon the rendering of goods or services. Such a process has application to businesses such as the insurance industry wherein account manager 202 may play the role of a claims adjuster disclosing an account number to merchant 206 for payment of services rendered for an insurance claim.

Returning to a discussion of the embodiment depicted in Figure 2, merchant 206 upon receipt of the account number information verifies the status and acceptance parameters of the present account by performing an authorization request 230 with authorizing agent 212. Merchant 206 forwards the account number, transaction amount, the merchant's SIC denoting its category of goods or services, the merchant's MID and the acquiring BIN associated with merchant 206. Authorizing agent 212 performs the authorization process which includes consulting the pre-authorization table when the merchant SIC presented in authorization request 230 corresponds to a pre-authorization SIC presented in establish authorization step 218. The authorization process of authorizing agent 212 is detailed in the flowchart of Figure 4. At the conclusion of the authorization process, authorizing agent 212 issues an authorization response 232 listing the acceptance or denial status resulting from the authorization process to merchant 206.

Generally at the authorization phase of a transaction, funds do not transfer between the parties. Rather, a settle account phase generally occurs at a periodic

point in time such as at the end of a business day or week. At such time, merchant 206 compiles a complete listing of authorized transactions occurring within the specified period which includes the present transaction of the previous discussion, and initiates a settlement request 234 with authorizing agent 212 by divulging the account number, the transaction amount and other pertinent and related information such as the merchant's SIC, MID and BIN.

In some financial configurations, authorizing agent 212 may also act as an account clearinghouse providing account settlements for card issuers having an established relationship with authorizing agent 212. Authorizing agent 212 issues a settlement request 236 to card issuer 214 which may contain the same or similar information as received from settlement request 234 or as shown in settlement request 236 may contain more descriptive information such as a merchant name and city as opposed to an MID. In one embodiment of the present invention, authorizing agent 212 additionally forwards the transaction identifier as received in pre-authorization request 226. Card issuer 214 issues payment settlement response 238 to acquiring bank 208 with the subsequent settlement response 239 for settlement of the account resulting from the present transaction.

Card issuer 214 issues a billing account 240 to account manager 202 detailing the account number, the transaction amount, merchant information and, when present, the transaction identifier. By presenting the transaction identifier to account manager 202 transactions authorized in the pre-authorize transaction phase may be traced through the authorization, settlement and reporting phases of account processing. By tracing or having a designator assigned to a specific transaction, the accounting resources of account manager 202 may close out such transactions upon the reporting of the completion of the transaction.

Figure 3 is a simplified diagram of authorization tables employed by an
authorizing agent for use in comparison of parameters of a requested transaction
with authorization limitations placed upon transaction, in accordance with an
embodiment of the present invention. An authorization agent 212 (Figure 2) stores
therein an authorization table 300 containing parameter limitations as previously
designated during the establish account phase of an account processing procedure.
During a traditional authorization procedure, the authorizing agent references a
standard authorization table containing limitations such as an SIC limit 312, a
transaction limit 314 and a balance limit 316. In the present invention specified
categories of transactions may be allowed to proceed when a pre-authorization
process has taken place.   Such transaction categories are stored within
authorization table 300 in a pre-authorization SIC table 302.

As illustrated in Figure 3, SICs 304, 306 and 308 correspond to SIC
category codes X, Y and Z, respectively, and designate transaction categories
requiring consultation with a pre-authorization table 318 to determine the
authorization of a requested transaction. In the preferred embodiment, pre-
authorization table 318 is comprised of a series of fields designating transaction
parameters that must be in compliance prior to issuing an authorization of the
requested transaction. Such transaction parameters include a quote amount 322,
a variance 324, a merchant ID (MID) 326 and an acquiring bank identification
number (BIN) 328. Quote amount 322 is comprised of an upper price boundary for
an approved transaction. A variance parameter 324 optionally provides tolerance
values for accommodating variations in "amounts." For example, a variance may
typically take the form of sales tax or regionalized price fluctuations or other
variations. Merchant identifier 326 optionally may provide a parameter requiring
the transaction to originate from a designated merchant or point of sale location.

Furthermore, acquiring bank identification number 328 may optionally provide a further grouping of select merchants and employ a specified bank before authorizing the transaction in question.

In another embodiment, a transaction identifier 330 is associated with pre-authorization transaction parameters during the pre-authorization process. Such association of an identifier permits a pre-authorizing agent such as an account manager to specify a purchase order number, a work order number or an insurance claim number to be included within the pre-authorization parameters of such goods or such services. Following the initiation and authorization of a transaction wherein the pre-authorization parameters were matched, the transaction identifier is attached with the settlement request information, depicted as settlement request 236 (Figure 2), for conveying the transaction information to a card issuer for reconveyance to the account manager. Upon receipt of the transaction identifier associated with the completed transaction account manager 202 may rectify accounting books or other records referencing the transaction identifier because the transaction identifier was associated with the billing account and request for payment. Such a technique enables a merchant to receive payment almost immediately upon the dispatch of a settlement request and relieves the accompanying correspondence associated with "cutting" a purchase order and writing a check for accounts payable.

In an alternate embodiment of the present invention, pre-authorization table 318 further comprises an SIC identifier field 320 for associating with a specific set of pre-authorization parameters. Furthermore, each parameter within the pre-authorization table need not be specified allowing greater flexibility to an account user in selecting vendors of goods or services.

Figure 4 is a flowchart of an authorization process incorporating pre-authorization, in accordance with a preferred embodiment of the present invention. An authorizing agent pre-authorization verification process 402 is carried out within an authorizing agent such as authorizing agent 212 described in Figure 2. Although the previous discussions including Figure 2 have illustrated entities such as authorizing agents being separate from card issuers, nothing prevents the combination of these elements into a single entity carrying out both processes therein. For example an account manager 202 (Figure 2) and account user 204 (Figure 2) may easily be combined into a single entity that both manages and uses an established account. Additionally, acquiring banks and card companies may further be included within other entities such as a card issuer or authorizing agent.

Authorizing agent pre-authorization verification process 402, in the preferred embodiment, is carried out by an authorizing agent 212 (Figure 2) by consulting a pre-authorization's SIC table 302 (Figure 3) of authorization table 300. A query task 404 compares the SIC value of the requested transaction with those previously stored within the pre-authorization SIC table 302 (Figure 3) during the establishment of the account phase. When the SIC code of the requested transaction does not match a SIC code specifically requiring additional pre-authorization, a standard authorization processing task 406 occurs wherein the standard authorization table 310 (Figure 3) having specific limitations such as transaction or balance limits is performed.

When query task 404 determines that the SIC code of the requested transaction corresponds with a SIC code requiring pre-authorization, a query task 408 performs a cursory evaluation upon the pre-authorization table to determine if there is a pre-authorization entry present. When a pre-authorization

entry is not present, a deny transaction task 410 returns a deny transaction status in the authorization response 232 (Figure 2).

When query task 408 locates pre-authorization data within the pre-authorization table, a query task 412 evaluates the requested transaction amount against the quote amount including any variance parameters included within the pre-authorization table. When the requested transaction amount exceeds the quote amount including any variances, the requested transaction is denied as described above. When the requested transaction amount does not exceed the boundaries established by the quote amount including any variances, a query task 414 further evaluates any other specified parameters such as merchant ID (MID) or acquiring bank identification number (BIN) against those supplied by the requested transaction. Again, if the parameters of the requested transaction do not conform of those specified in the pre-authorization table, the transaction is denied.

When query task 414 determines that the parameters of the requested transaction conform to all other parameters specified in the pre-authorization table, an approved transaction task 416 authorizes the transaction in the affirmative. Although the above flow diagram has been specified in terms of task ordering, nothing precludes the evaluation of parameters or conditions in varying orders. For example, a merchant identifier specified in the pre-authorization table may be compared primary to the evaluation of the transaction amount without affecting the spirit of the invention.

Figure 5 is a depiction of a billing account report associating a transaction identifier with a transaction yet to be billed, in accordance with an embodiment of the present invention. As discussed above, a transaction identifier 510 may be associated to a pre-authorized transaction generated by an account manager. Traditional billing statements presented to an account manager contain generic

information such as an account number, a transaction amount and information identifying a merchant. Historically, an account manager was then left to search back through claims, work orders or purchase orders to align a transaction amount and merchant identifier contained within the billing statement to an earlier authorization.

In the present invention, a billing account 502 is comprised of an account number 504, merchant information 506, a transaction amount 508 and a transaction identifier 510. Transaction identifier 510, by containing descriptive information unique to the transaction, enables an account manager to quickly identify a corresponding authorization document for account reconciliation. In the preferred embodiment of the present invention, transaction identifier 510 contains an alpha-numeric field which is defined by account manager 202 (Figure 202) and distributed to card issuer 214 using pre-authorization request 224, which in turn is forwarded to authorizing agent 212 and pre-authorization request 226, respectively. By allowing a transaction identifier to be associated with pre-authorization process, less sophisticated equipment such as transaction processing equipment resident at a merchant point of sale may remain relatively unsophisticated as such equipment does not process or pass through any additional parameters such as a transaction identifier but the account manager still gets a unique per transaction identification code.

Figure 6 is a flow diagram illustrating account processing which employs pre-authorization of select transactions without requiring an account user to perform a payment presentment step, in accordance with an embodiment with the present invention. In the present embodiment, the established account phase proceeds according to that of the previous embodiment wherein an established account 616 and an established authorization step 618 establish an account number,

SIC limitations, transaction limitations and pre-authorization SICs requiring individual pre-authorization.

An account user 604 requests goods or services of an account manager 602 in a task 620. Account manager 602 negotiates a price quotation 622 from a merchant 606. Account manager 602 either upon resolution of a price quotation from a merchant 602 or, as discussed above, account manager 602 may obtain a quote amount value for placing within a pre-authorization request from other sources such as other standard pricing materials.

In the present embodiment, account manager 602 provides merchant 606 as opposed to account user 604 with an account number in account disclosure step 624 for utilization in a subsequent authorization request initiated by merchant 606. Following the disclosure of the account number to merchant 606, account manager 602 performs a pre-authorization request 626 in accordance with the description of the previous embodiment. A pre-authorization request 628 then flows from card issuer 614 to authorizing agent 612 for population of the pre-authorization table 318 (Figure 3). Such steps complete the pre-authorization phase of the account processing procedure.

Upon the rendering of service or delivery of goods, merchant 606 commences an authorization transaction process by issuing an authorization request 630 to authorizing agent 612 utilizing the account number delivered thereto by account manager 602 in account disclosure steps 624. Such an account number distribution technique is useful for applications such as insurance claim processing. For example, account user 604 assumes the role of an insured placing a claim against account manager 602, who further assumes the role of the insurer, or alternatively, a claims adjuster. Account manger 602 negotiates a repair price with a merchant 606 assuming the role, in the case of auto insurance, of a repair shop.

Upon completion of the negotiation process and the resolution of a claim amount, account manager 602 (*i.e.*, claims adjuster) discloses an account number for use by merchant 606 (*i.e.*, repair shop) for use in obtaining reimbursement for goods and services upon the completion of rendering such goods or services. Account manager 602 (*i.e.*, claims adjuster) initiates pre-authorization request 626 by including the divulged account number, and any other parameters deemed necessary (*e.g.*, merchant identification number). Furthermore, to aid account manager 602 (*i.e.*, claims adjuster) in reconciling their accounting system, account manager 602 includes a transaction identifier, which by way of example may be in the form of an insurance claim number uniquely identifying the requested claim by the insured.

Upon the rendering of services or the delivery of goods, merchant 606 (*i.e.*, repair shop) issues an authorization request 630 comprising the account number disclosed with the amount of the transaction and other identifiers flowing therewith. Authorizing agent 612 performs an authorization procedure and renders an authorization response 632 stating the status of either acceptance or denial of the requested transaction to merchant 606. Merchant 606, at a periodic interval, issues a settlement request 634 containing the account number, transaction amount and other identifying fields to authorizing agent 612 for account reconciliation. Authorizing agent 612 processes the settlement request in conjunction with card issuer 614 in a settlement request 636 including the account and transaction-related information such as account number, transaction amount, merchant number/name/address and the transaction identifier tieing the present billing line item to the originating claim number as delivered to account manger 602 in billing account step 640 as further received from settlement request step 636, and settlement response steps 638 and 639.

As briefly described above, the present invention provides a mechanism for utilizing existing account processing infrastructure such as existing point of sale terminals which are generally incapable of inputting additional information such as a transaction identifier into a transaction. In the present embodiment, associating a transaction identifier to a specific transaction is transparent to an account user, merchant, acquiring bank and bank card association. Furthermore, because of the services provided by the card issuer to the account manager, the account manager may establish, edit and delete pre-authorizations at will without exhaustive and expensive account-modifying parameters as historically required.

Figure 7 is a simplified transaction diagram for use in wide-area networking environment in accordance with a preferred network embodiment of the present invention. The present embodiment finds application for use in an environment wherein an account user must divulge an account number in order to make a purchase using a transaction device such as a credit card or other similar device. In environments where the physical or personal presentment of such a transaction card or device is impracticable such as in a telephonic transaction or in a preferred embodiment such as in the use of a computer network such as the Internet network. Users or consumers have heretofore been reluctant to divulge their account number into an amorphous and unknown domain for fear of an unscrupulous merchant acquiring their account number and utilizing the account number for unauthorized transactions. An account user or consumer has heretofore been required to rely upon the integrity of a remote merchant in order to safeguard against such abuses. In the present embodiment, however, a user/consumer is issued an account number that when used will be denied unless a specific transaction has been individually pre-authorized by the user/consumer. Such a process is detailed in Figures 7 and 8. In Figure 7, in a step 700 a consumer discovers through whatever process the

consumer chooses, a particular product of interest. The consumer may discover

such a product either by shopping on the Internet or through other forms of

shopping which include other forms of remote shopping such as catalog perusal as

well as other imaginable forms of shopping. In prior remote shopping environment

applications, a user would immediately thereupon divulge their account number.

In the present network embodiment, the consumer in a step 702 transitions to a pre-

authorization environment such as a pre-authorization web page on the Internet.

In the network embodiment of the present invention, the user performs a login

procedure or other security procedure for authenticating or otherwise identifying

the accessing user/consumer as being a bona fide user/consumer. Such an

authentication process may take the form of a login and password or PIN or other

verification or authentication processes known by those of skill in the art. The

user/consumer may alternatively present the account number to such an

authorization page, or the authorization page may match the user/consumer's login

and password data with a stored account number. During such a pre-authorization

process, the pre-authorization values entered by the user/consumer are stored in a

database 704 and may be comprised of an account number, a transaction valid

duration (good through) date, a quote or value amount, a variance, and any other

miscellaneous identification fields. Upon the termination of the pre-authorization

step 702 and the storage in database 704, the pre-authorization information is

forwarded to a database that is accessible by the transaction authorizing agent. It

should be appreciated that the transaction authorizing agent may be one and the

same as the authorization web page provider or any of the other transactional

entities including the bank card association or card issuer.

Following the pre-authorization process described above, the consumer

returns in a step 706 to the web merchant's web page, in the instance of an Internet

environment, to proceed with the purchasing transaction. In the step 706, the user/consumer offers to the web merchant an account number. In the present embodiment, the user/consumer operating with an account number that specifically requires the pre-authorization process performed immediately above derives a sense of security knowing that the act of divulging the account number to a merchant would only enable that specific merchant to successfully utilize the divulged account number in at most a single transaction and for a specific amount. Therefore, the consumer is protected from unscrupulous merchants that would heretofore misuse a divulged account number.

Such a pre-authorization embodiment as described herein appears transparent to all merchants. Following the account number divulging act by the consumer to the merchant, the web merchant in a step 708 performs a traditional authorization request which in a step 710 passes through an acquiring bank, a bank card association to an authorizing agent. The authorizing agent thereupon performs an authorization with the account number and any other associated information passed on from the merchant such as the transaction amount. As part of the authorizing act, in a step 712 the account number with its accompanying transaction amount is compared against the previously pre-authorized information which was in the preferred embodiment sent to the authorizing agent for storage as received at the authorization web page. Once a comparison has been made of the pre-authorized "amount" and the transaction amount as received in the authorization process from the merchant, the authorizing agent will thereafter either approve or deny the transaction according to the pre-authorization parameters. The authorizing agent in a step 714 also subjects the transaction to the traditional standard authorization checks such as credit limits and any variations including an account in good standing. Following the pre-authorization checks in

step 712 and the standard authorization checks in step 714, the authorizing agent may thereupon either decline the transaction in a step 716 or approve the transaction in a step 718.

If a transaction is approved, the pre-authorization process previously performed is either deleted from the system or deactivated, thereby preventing any unscrupulous subsequent attempts to utilize the divulged account number. Any additional transactions desired to be performed by the user/consumer require the user/consumer to undergo the pre-authorization process described above in steps 702 and 704. Since each of the pre-authorization requests is valid for only a single transaction, a particular user/consumer derives additional peace of mind in employing an otherwise vulnerable account number in performing remote commerce such as electronic commerce.

Those skilled in the art appreciate that other applications of the above-described technology may also be employed in applications such as transactions engaged in by a user/consumer to other remote entities such as catalog merchants by using a computer interface pre-authorization approach or alternatively through a telephonic interface which enables a user to specify an account number and a quotation or potential transaction amount.

Figure 8 is a flow diagram of the immediately above described pre-authorization process for use in a wide-area networking environment.

It is appreciated that a potential user of the system would need to establish an account. In a step 816 a web account user or a consumer 804 interacts with a card issuer 814 to obtain an account number and other various limits such as transaction limits and even specific transaction type limits. Following the establishment of an account step 816 between a potential web account user and a card issuer, a step 818 establishes the authorization restrictions with the

authorizing agent 812. While not explicitly shown, the authorizing agent must also be aware of the corresponding account number as well as the transactional limits and other various limits placed upon a user's account transactions. In one implementation of the present embodiment, card issuer 814 may issue a unique series of account numbers which uniquely identify to authorizing agent 812 that particular transaction employing such a unique account number require the pre-authorization process before any transactions may be approved.

Following the establishment of account stage, a user engages in traditional shopping or browsing of the preferred environment, one of which may take the form of electronic shopping on the Internet. In a step 820, the web account user 804 discovers a web merchant page 806 bearing a preferred good or service to be acquired by web account user 804. In a step 822, web merchant page 806 discloses a price quotation or a quotation amount which may in its simplest form be a textual listing on the web merchant page of a sale amount. Once a web account user 804 determines the desirability of a web merchant's good or service, the web account user 804 engages in a pre-authorization process with an authorization web page 815 which is affiliated in some manner with a card issuer or other service provider which presents a front-end interactive environment to the web account user 804. As alluded to above, an alternate embodiment may employ a telephonic or other interactive front-end enabling a web account user the ability to pre-authorize a forthcoming transaction.

In the login step 823, the user may interface with the authorization web page 815 in any of several traditional login procedures such as the offering of a login alpha numeric string followed by the input of a password and may alternatively require the user to enter an account number. In a step 824 the web account user 804 includes the specific parameters within which a forthcoming

transaction must comply. Such parameters may include the divulging of an account number, a transaction amount or quotation amount including a variance which may allow a user to approximate a percentile taxation rate. Alternative parametric information may also include a duration in which a transaction must be performed else the pre-authorization becomes stale and therefore invalid. The use of a transaction valid duration date also known as a "good through" date enables a user that anticipates an imminent transaction to specify a duration date or time which minimizes the exposure to any account number misuse. In a step 826 the pre-authorization request is forwarded from the authorization web page 815 to the authorizing agent 812 that will subsequently perform any authorization requests received from a merchant.

Following the pre-authorization phase, the web account user 804 returns to the web merchant page 806 in a step 828 to consummate the transaction by presenting the web account user's account number. Thereafter the web merchant performs an authorization request 830 with authorizing agent 812 in a traditional transaction fashion by submitting an account number and a transaction amount along with any other miscellaneous identifying parameters. Authorizing agent 812 thereafter performs the authorization process described above in Figure 7 and returns in a step 832 an authorization response in the form of an acceptance or a denial of the account number for use in payment for the requested transaction.

Account settlement and account reporting take a similar form as to the other embodiments described in previous figures in that in a step 834 the web merchant requests a settlement with the authorizing agent which thereafter transfers a settlement request in a step 836 to the card issuer which sends payment in steps 838 and 839 to the web merchant's acquiring bank. The report accounting stage also

forwards in a step 840 a billing account from the card issuer to the web account

user which contains traditional account statement information described above.

Figure 9 depicts a block diagram of an authorization table including both

standard and pre-authorization table as stored within an authorizing agent in

accordance with a preferred network embodiment described herein. The

authorizing agent described herein in the network embodiment stores an

authorization table 900 containing a list of accounts which require pre-

authorization as established during an account establishment stage. The

authorizing agent upon receiving the established account authorization for a

particular account number populates a corresponding standard authorization table

910 with traditional information such as account limits 912, transaction limit 914,

and a balance limit 916. A particular account such as account number 904

requiring pre-authorization prior to authorizing a transaction also has associated

therewith a pre-authorization table 918 which has the corresponding account

number 920 and other pre-authorization fields described herein above. One such

field is a quotation amount 922 which is the pre-authorized amount that a

user/consumer input during the pre-authorization stage. Other values input by the

user/consumer during the pre-authorization phase may include a variance amount

and a transaction valid duration or "good through" date as well as any other

miscellaneous I.D. information. Such information is thereafter referenced by the

authorizing agent during an authorization transaction stage.

A particular network embodiment has been described herein having

applications to a consumer to business transaction. In such an environment, a user

specifically pre-authorizes a forthcoming transaction thereby providing a narrow

window in which a transaction must be consummated. By enabling a user to

specifically pre-authorize a forthcoming transaction with the inclusion of specific

1   transaction parameters, provides an additional control against misuse of account

2   numbers which must be divulged to engage in remote commerce where physical

3   presentment of a physical instrument such as a credit or debit card is infeasible.

4   It is contemplated that other remote environments may employ the process as

5   described herein without departing from the spirit of the invention. Such

6   additional environments and embodiments are contemplated within the scope.

7   The present invention may be embodied in other specific forms without

8   departing from its spirit or essential characteristics. The described embodiments

9   are to be considered in all respects only as illustrative and not restrictive. The

10   scope of the invention is, therefore, indicated by the appended claims rather than

11   by the foregoing description. All changes which come within the meaning and

12   range of equivalency of the claims are to be embraced within their scope.

13   What is claimed and desired to be secured by United States Letters Patent

14   is:

1.   In a network environment, an account authorization method wherein a portion of account transactions require individual pre-authorization, said method comprising the steps of:

      a)   establishing an account between network user and an account issuer, said account having an imposed pre-authorization transaction designator for denoting said portion of account transactions that require said individual pre-authorization;

      b)   said network user pre-authorizing said account upon a match of each of at least one specified transaction parameter of said imposed pre-authorization transaction designator to authorize a requested transaction; and

      c)   authorizing said requested transaction when in conformity with each of said at least one specified transaction parameter.

2.   In a network environment, the account authorization method as recited in claim 1, wherein said establishing an account step comprises the step of designating a transaction valid duration period as said imposed pre-authorization transaction parameters.

3.   In a network environment, the account authorization method as recited in claim 1, wherein said pre-authorizing step comprises the step of designating said at least one specified transaction parameter as a quotation amount describing a price boundary under which to authorize said requested transaction.

4.   In a network environment, the account authorization method as recited in claim 3, wherein said designating said at least one specified transaction parameter as a quotation amount step further comprises the step of designating a variance parameter from said quotation amount as one of said at least one specified transaction parameters.

5.   In an account authorization system for facilitating the authorization of account transactions occurring in a network environment wherein a portion of said account transactions require individual pre-authorization, a method for authorizing said portion of said account transactions requiring individual pre-authorization comprising the steps of:

a)   receiving an authorization table of an account established between a network user and an account issuer, said authorization table capable of having a pre-authorization transaction designator to denote said portion of account transactions that require said individual pre-authorization;

b)   receiving in a pre-authorization table within said authorization table as a result of a pre-authorization process by said network user at least one specified transaction parameter for association with said pre-authorization transaction designator; and

c)   authorizing said requested transaction when parameters from a requested transaction authorization are in conformity with each of said at least one specified transaction parameter.

6.   In an account authorization system for facilitating the authorization of account transactions occurring in a network environment wherein a portion of said account transactions require individual pre-authorization, the method for authorizing said portion of account transactions requiring individual pre-authorization as recited in claim 5, wherein said receiving in a pre-authorization table step further comprises the step of receiving a quotation amount as said at least one specified transaction parameter describing a price boundary under which to authorize said requested transaction.

7.   In an account authorization system for facilitating the authorization of account transactions occurring in a network environment wherein a portion of said account transactions require individual pre-authorization, the method for authorizing said portion of account transactions requiring individual pre-authorization as recited in claim 6, wherein said receiving a quotation amount as said at least one specified transaction parameter step further comprises the step of receiving a variance parameter designating an allowable deviation from said quotation amount as one of said at least one specified transaction parameters.

8.   An account authorization system for facilitating the authorization of account transactions occurring in a network environment wherein said account transactions require individual pre-authorization, said system comprising:

a)   an account between a network user and an account issuer, said account having associated therewith an authorization table to designate said account transactions that require said individual pre-authorization;

b)   a pre-authorization table comprising at least one specified transaction parameter as required to authorize a requested transaction; and

c)   means for authorizing said requested transaction when in conformity with said at least one specified transaction parameter.

9.   The account authorization system as recited in claim 8, wherein said at least one specified transaction parameter is a quotation amount describing a price to authorize said requested transaction.

10.   The account authorization system as recited in claim 9, wherein said at least one specified transaction parameter further comprises a variance parameter from said quotation amount.

11.   The account authorization system as recited in claim 8, wherein said means for authorizing said requested transaction comprises an authorizing agent for receiving said at least one specified transaction parameter, comparing said at least one specified transaction parameter against at least one corresponding requested transactions parameter and approving said requested transaction upon conformity therewith.

12. In an account authorization system for facilitating the authorization of account transactions occurring in a network environment wherein a portion of said account transactions require individual pre-authorization, a computer-readable medium having computer-executable instructions for authorizing said portion of account transactions requiring individual pre-authorization for performing the steps of:

a) receiving an authorization table of an account established between a network user and an account issuer, said authorization table capable of having a pre-authorization transaction designator to denote said portion of account transactions that require said individual pre-authorization;

b) receiving in a pre-authorization table within said authorization table as a result of a pre-authorization process by said network user at least one specified transaction parameter for association with said pre-authorization transaction designator; and

c) authorizing said requested transaction when parameters from a requested transaction authorization are in conformity with each of said at least one specified transaction parameter.

13.   The computer-readable medium of claim 12 having further computer-readable instructions wherein said receiving in a pre-authorization table step further comprises the step of receiving a quotation amount as said at least one specified transaction parameter describing a price boundary under which to authorize said requested transaction.

14.   The computer-readable medium of claim 13 having further computer-readable instructions wherein said receiving a quotation amount as said at least one specified transaction parameter step further comprises the step of receiving a variance parameter designating an allowable deviation from said quotation amount as one of said at least one specified transaction parameters.

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ACCOUNT PROCESSING WITH GENERALIZED AUTHORIZATION

FIG. 1
(PRIOR ART)

FIG. 2A

ACCOUNT PROCESSING WITH PRE-AUTHORIZATION OF SELECT TRANSACTIONS

FIG. 2B

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FIG. 3

AUTHORIZING AGENT
PRE-AUTHORIZATION
VERIFICATION ~402

SIC
REQUIRES
PRE-AUTH
? ~404

N

Y

STANDARD
AUTHORIZATION
PROCESSING 406

PRE-AUTH
ENTRY IN
PRE-AUTH
TABLE ~408

N

Y

DENY
TRANSACTION ~410

AMT = QUOTE AND
VARIANCE
AMT ~412

N

Y

MATCH ON
OTHER SPECIFIED
PARAMETERS ~414

N

Y

APPROVE
TRANSACTION ~416

END
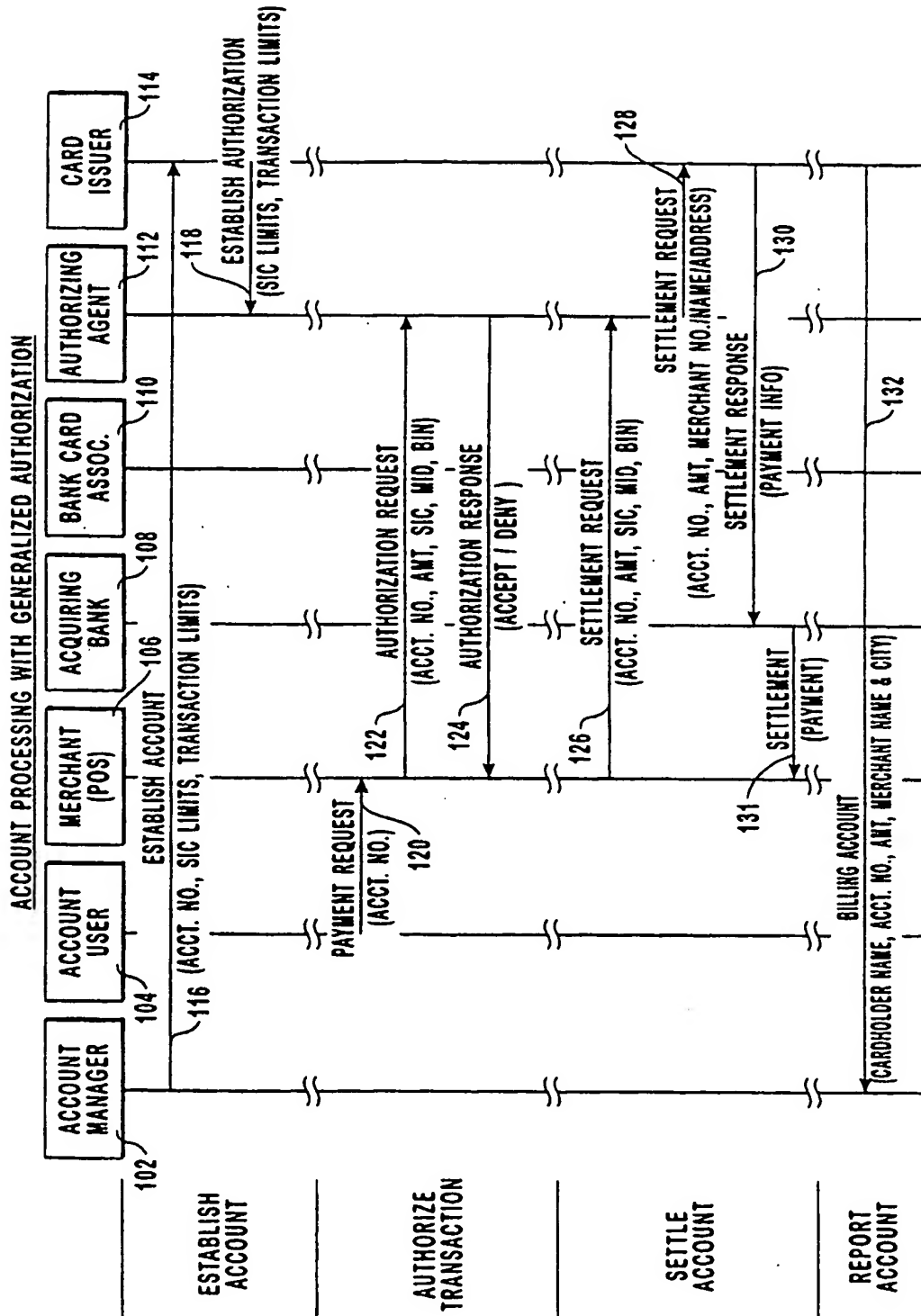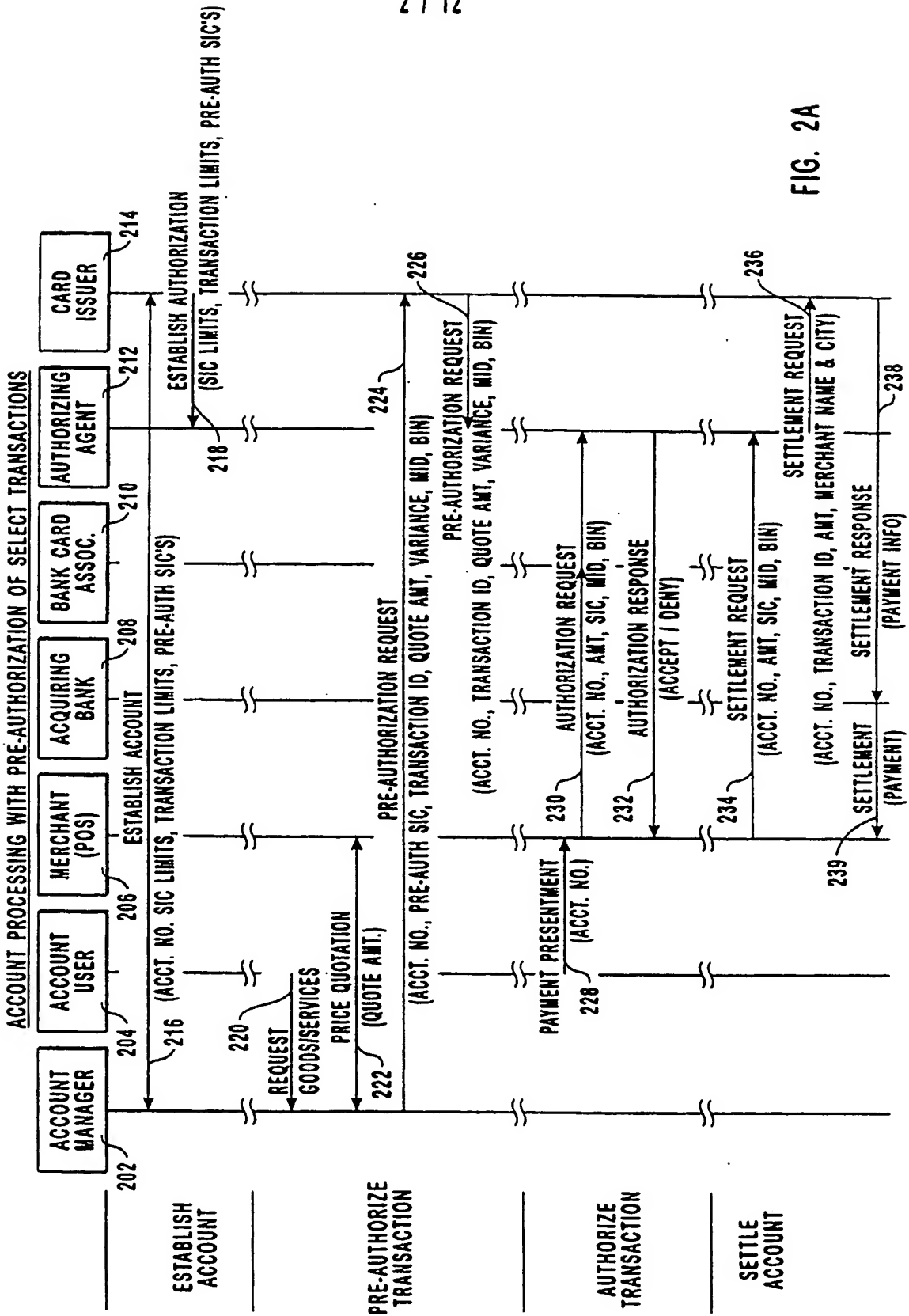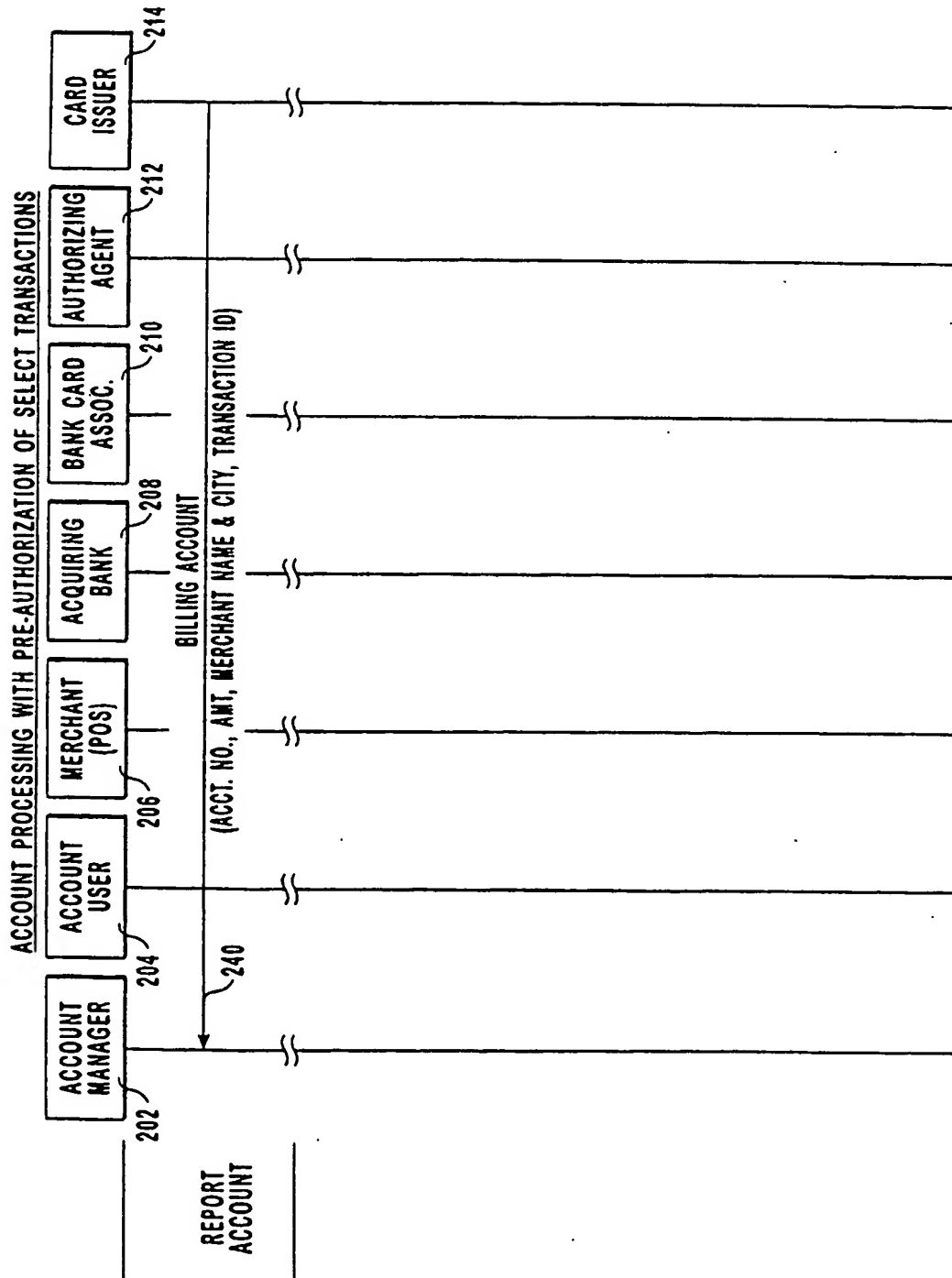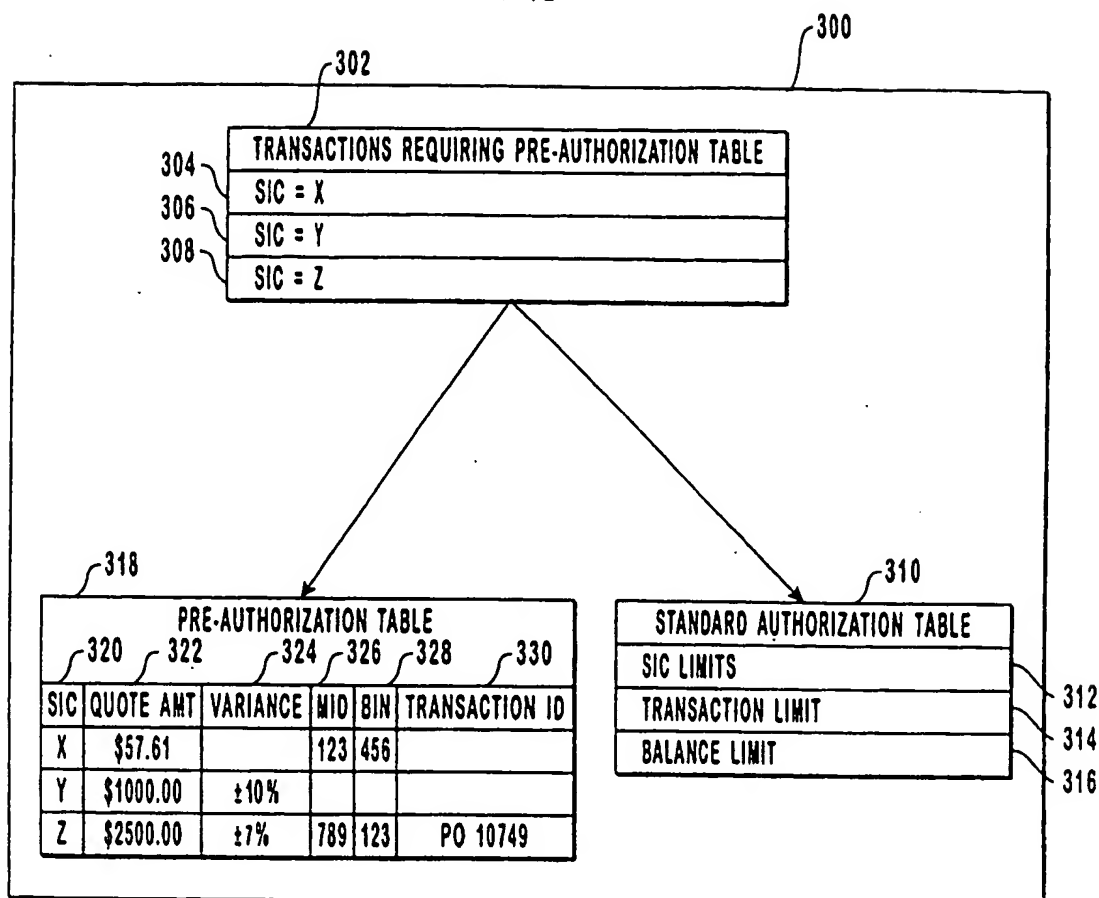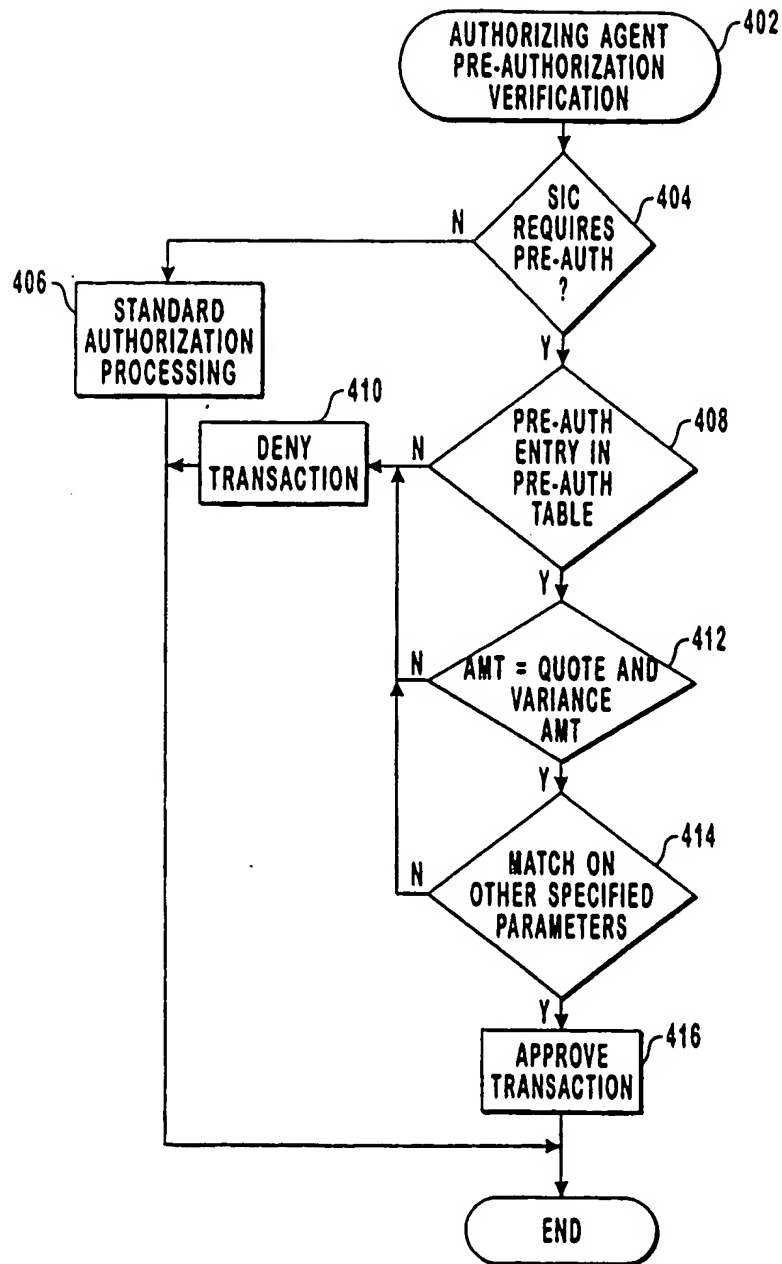
FIG. 4

502

BILLING ACCOUNT			

ACCOUNT NUMBER	MERCHANT INFO	AMOUNT	TRANSACTION IDENTIFIER
123-456-7	BOB'S BODY SHOP	$1234.56	CLAIM NO. 98765
765-432-1	WIDGET CO.	$87.65	P.O. NO. 12345

504   506   508   510

FIG. 5

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ACCOUNT PROCESSING WITH PRE-AUTHORIZATION OF SELECT TRANSACTIONS BYPASSING USER PRESENTMENT

FIG. 6A

| ACCOUNT MANAGER 602 | ACCOUNT USER 604 | MERCHANT (POS) 606 | ACQUIRING BANK 608 | BANK CARD ASSOC. 610 | AUTHORIZING AGENT 612 | CARD ISSUER 614 |

ESTABLISH ACCOUNT

616 (ACCT. NO., SIC LIMITS, TRANSACTION LIMITS, PRE-AUTH SIC'S)
ESTABLISH ACCOUNT

ESTABLISH AUTHORIZATION
(SIC LIMITS, TRANSACTION LIMITS, PRE-AUTH SIC'S)

618

620 REQUEST GOODS/SERVICES

PRICE QUOTATION
(QUOTE AMT.)
622

ACCOUNT NO. DISCLOSURE
(ACCT. NO.)
624

PRE-AUTHORIZE TRANSACTION

PRE-AUTHORIZATION REQUEST
(ACCT. NO., TRANSACTION ID, QUOTE AMT, VARIANCE, MID, BIN)
626

PRE-AUTHORIZATION REQUEST
(ACCT. NO., TRANSACTION ID, QUOTE AMT, VARIANCE, MID, BIN)
628

AUTHORIZE TRANSACTION

AUTHORIZATION REQUEST
(ACCT. NO., AMT, SIC, MID, BIN)
630

AUTHORIZATION RESPONSE
(ACCEPT / DENY)
632

SETTLE ACCOUNT

SETTLEMENT REQUEST
(ACCT. NO., AMT, SIC, MID, BIN)
634

SETTLEMENT REQUEST
(ACCT. NO., TRANSACTION ID, AMT, MERCHANT NAME & CITY)
636

SETTLEMENT RESPONSE
(PAYMENT INFO)
638

SETTLEMENT
(PAYMENT)
639

ACCOUNT PROCESSING WITH PRE-AUTHORIZATION OF SELECT TRANSACTIONS BYPASSING USER PRESENTMENT

ACCOUNT MANAGER	ACCOUNT USER	MERCHANT (POS)	ACQUIRING BANK	BANK CARD ASSOC.	AUTHORIZING AGENT	CARD ISSUER
602	604	606	608	610	612	614

640

BILLING ACCOUNT
(ACCT. NO., AMT, MERCHANT NAME & CITY, TRANSACTION ID)

REPORT ACCOUNT

FIG. 6B

716 DECLINE

714 STANDARD AUTHORIZATION CHECKS (CREDIT LIMIT)

718 APPROVE

712 MERCHANT AUTH REQUEST MATCHES AGAINST CONSUMER AUTHORIZATION

CONSUMER ENTERS:
* ACCOUNT NUMBER
* $ AMOUNT
* TRANSACTION VALID DURATION PERIOD

704 CONSUMER CREATES AN AUTHORIZATION* AND IT IS STORED FOR MATCH AGAINST FUTURE MERCHANT AUTHORIZATION REQUEST

710 DATA GOES THROUGH ACQUIRING BANK, CARD COMPANY AND AUTHORIZING AGENT

708 WEB MERCHANT SENDS IN AN AUTHORIZATION REQUEST

702 CONSUMER LOGS INTO THE AUTHORIZATION INTERNET WEB PAGE

706 CONSUMER GIVES MERCHANT THEIR CREDIT CARD NUMBER

700 CONSUMER FINDS A PRODUCT ON THE WEB

FIG. 7

FIG. 8A

ACCOUNT PROCESSING WITH PRE-AUTHORIZATION OF SELECT TRANSACTIONS

WEB ACCOUNT USER (CONSUMER) 804

WEB MERCHANT PAGE 806

ACQUIRING BANK 808

BANK CARD ASSOC. 810

AUTHORIZING AGENT 812

CARD ISSUER 814

AUTHORIZATION WEB PAGE 815

BILLING ACCOUNT
(ACCT. NO., AMT, MERCHANT NAME & CITY, TRANSACTION ID) 840

REPORT ACCOUNT

FIG. 8B

FIG. 9

INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7   G07F19/00   G07F7/08

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7   G07F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 500 513 A (LANGHANS STEPHEN ET AL) 19 March 1996 (1996-03-19)	1,5,8,12
A	column 1, line 61 –column 3, line 12	2-4,6,7, 9-11,13, 14
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Date of the actual completion of the international search	Date of mailing of the international search report
22 August 2000	30/08/2000

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